

Remarks/Arguments

Claims 1-19 are pending in the application. Claims 1-19 are rejected by the Examiner. Claims 13 and 14 are canceled in this response. Claims 1-12 and 15-19 remain pending.

Claim objections (claims 2 and 5)

The Examiner objects to claims 2 and 5 because the applicants mistakenly typed “actuable” rather than “actuatable.” The applicants thank the Examiner and replace actuable with actuatable according to the Examiner’s suggestion.

35 USC §102(e) (claims 1-2, 4-9 and 11-18)

The Examiner rejects claims 35 USC §102(e) as being anticipated by Yamasaki (US PgPub 2002/0121652) (“the Yamasaki application”). While applicants respectfully disagree with the Examiner, claims 13 and 14 are canceled in this response. By doing so, the applicants do not intend to dedicate the subject matter of the canceled claims to public, and reserve the right to pursue the subject matter of these canceled claims in a continuation or divisional application at their election. The applicants respectfully traverse the remainder of the rejections.

Regarding claim 1, the Examiner asserts that “paragraph 0097” and the case where “specific wavelengths of light are sent through [the filter]” anticipates “said filter being *operable to alternate between transmitting and reducing incident light* on said pixel portion” (emphasis added). The applicants respectfully assert that the filter described in paragraph 0097 are not “operable” and are also not “operable to alternate between transmitting and reducing” but rather are fixed and non-operable and are consistently described in the Yamasaki application as only “passing” incident light and not alternating between passing and reducing. (cf. Para. 0097) The Yamasaki application does not appear to teach a filter that has the capability to alternate between transmitting and reducing incident light on a portion of a single pixel. A difference between the Yamasaki application and applicants’ claim 1 can be described as active verses passive control of passing and reducing incident light on the pixel portion.

The Examiner asserts in later paragraphs that introduction of different wavelengths of light may result in some or no light passing through the filter. The applicants respectfully assert that selective introduction of light on the filter does not anticipate operative control of the filter itself to accomplish alternately transmitting and reducing. The Applicants respectfully assert it improper to construe a filter “operable to alternate between transmitting and reducing” as encompassing the fixed and passive color filter (neither mechanically nor electrically actuatable) taught in paragraphs 0097 and 0099 of the Yamasaki application. The Applicants respectfully request withdrawal of the 102(e) rejection of claim 1 based on these points.

Claims 2, 4 and 5 depend from claim 1 and so contain each of its limitations. For at least the reasons stated above for claim 1, the applicants respectfully request withdrawal of the 102(e) rejections of claim 1.

Regarding claim 6, the Examiner asserts that “each of said filters being operable to alternate between transmitting and filtering said light for a respective portion of its associated pixel that is different from the pixel portion for each other filter associated with the same pixel” (claim 6) is anticipated by paragraph 0097 by writing that “specific wavelengths of light are sent through, i.e. it can block all light if none of the wavelengths required are present.” (OA at P. 4) For at least the reasons stated above for claim 1, the applicants respectfully assert that the Yamasaki application does not teach filters “*operable* to alternate between transmitting and filtering” (emphasis added) and so request withdrawal of the rejection of claim 6.

Additionally, the applicants respectfully assert that the filter taught in paragraph 0097 does not teach “a plurality of filters associated with each of said pixels...” (claim 6) For example, Fig. 4 illustrates that “[o]ne pixel unit has two photoelectric conversion units in proximity to each other.” (paragraph 0099, See paragraphs 0160-0161). The Yamasaki application teaches one filter for each pixel in a well-known Bayer pattern. (cf. paragraph 0101 describing the symbol R, G, or B and suffix 1 and 2 in Fig. 4) Even if each of the conversion units is interpreted to mean a pixel, there would still only be one filter (or portion of a filter, not a plurality of filters) for each pixel. The applicants respectfully request withdrawal of the 102(e) rejection based on this additional point.

Claims 7-9, 11 and 12 depend from claim 6 and so contain each of its limitations. For at least the reasons stated above for claim 6, the applicants request withdrawal of the rejection of claims 7-9, 11 and 12.

The applicants cancel claims 13 and 14 in this response.

Regarding claim 15, the Examiner writes that Figure 37 discloses a method for scanning an object, and further that Figure 37 discloses “directing light from different locations of the object to different portions of a pixel (figure 37).” The applicants respectfully assert that Figure 37 is “a circuit diagram of the area sensor unit” (paragraph 0075) and teaches an apparatus “capable of easily switching between addition and non-addition of signal charges in two photoelectric conversion units (paragraph 0088) and does not teach a method, but rather a structure. Assuming, *arguendo*, that a method is inherent in disclosure of the apparatus, there is no teaching of “directing” the light that reaches the area sensor unit in Figure 37. The applicants request withdrawal of the anticipation rejection of claim 15 based on this point.

The Examiner also writes that “alternately transmitting and at least partially blocking said light for said different pixel location in sequence” (claim 15) is anticipated by figure 4 and the “color filter array of multiple filters for each individual pixel.” (O.A. at P. 6) Applicants’ respectfully assert that teaching of fixed color filters in a well-known Bayer pattern does not anticipate the active control recited in applicants’ method claim 15, namely “alternatively transmitting and at least partially blocking said light for said different pixel location in sequence” (claim 15) and so request withdrawal of the rejection of claim 15. Additionally, the applicants refer the Examiner to the alphanumeric scheme of Fig. 4 that teaches the same color of filter over each of the first and second photoelectric conversion units per pixel. Assuming, *arguendo*, that there are two filters for each pixel, figure 4 teaches that each filter is the same color (one of green, red, or blue) and so they would each transmit the same energy with a given light. The filters could not read as “alternately transmitting and at least partially blocking said light” (claim 15) at different portions of the same pixel (i.e. each of the two photoelectric conversion units per pixel) because the filters are the same and

fixed. For each of the reasons stated above, the applicants respectfully request withdrawal of the anticipation rejection of claim 15.

Additionally, the Examiner writes that paragraph 0141 et seq. teaches “reading out said pixel at different times corresponding to the transmission of said light to said different pixel portions” (claim 15). The applicants are unable to locate a teaching in 0141 et seq. of reading out a single pixel at different points in time “corresponding to the transmission of said light” to “*different portions*” of that same pixel. The Examiner does not refer the applicants to specific text other than the gross reference to multiple paragraphs. If the Examiner clarifies the rejection of claim 15 with respect to this claim 15 step in the next Office Action, the applicants respectfully assert that any further Office Action needs to be a non-final Office Action with respect to such clarification. (See MPEP 706.07(a))

Claims 16-18 depend from claim 15 and so contains each of its limitations, for at least the reasons stated above for claim 15, the applicants request withdrawal of the anticipation rejections of claims 16-18.

35 USC §103(a) (claims 3, 10 and 19)

The Examiner rejects claim 3 under 35 USC §103(a) as being unpatentable over the Yamasaki application and further in view of Barr (US patent No. 4,516, 032).

Regarding claim 3, the claim depends from claim 1 and so contains each of its limitations. For at least the reasons stated above for claim 1, the applicants respectfully request withdrawal of the rejection of claim 3.

The Examiner rejects claim 10 and 19 under 35 USC §103(a) as being unpatentable over the Yamasaki application and further in view of Bean et al (US PgPub 2003/0011700).

Regarding claims 10, the claim depends from claim 6 and so contains each of its limitations. For at least the reasons stated above for claim 6, the applicants respectfully request withdrawal of the rejection of claim 10.


Regarding claim 19, the claim depends from claim 16 which itself depends from claim 15, and so contains each of the limitations of claims 15 and 16. For at least the reasons stated above for claims 15 and 16, the applicants respectfully request withdrawal of the rejection of claim 19.

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Amdt. Dated February 16, 2007
Reply to Office Action of November 17, 2006

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

Date: February 16, 2007

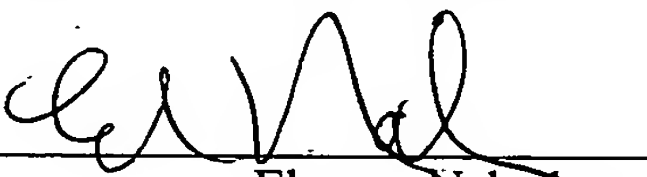
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Feb. 16, 2007
Date


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